BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Foundation Diploma in Engineering Pearson BTEC International Level 3 Diploma in Engineering Pearson BTEC International Level 3 Diploma in Electrical/Electronic Engineering Pearson BTEC International Level 3 Diploma in Mechanical Engineering Pearson BTEC International Level 3 Diploma in Digital Engineering Pearson BTEC International Level 3 Extended Diploma in Engineering Pearson BTEC International Level 3 Extended Diploma in Electrical/Electronic Engineering Pearson BTEC International Level 3 Extended Diploma in Mechanical Engineering Pearson BTEC International Level 3 Extended Diploma in Digital Engineering
Unit number and title	**Unit 21: Electronic Measurement and Testing of Circuits**
Learning aim(s)	**D:** Review the measurement and testing of electronic circuits and reflect on own performance
Assignment title	Review and reflection on measuring and testing electronic circuits
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	You are a first year apprentice with a company that makes bespoke products for a wide range of industries. Many of the products contain electronic circuits, which are designed and made in-house Your supervisor is pleased with the progress you have made when you have completed tasks asked of you as part of your placement with the Measurement and Testing Department. The final thing you need to do is prepare for your final review meeting with your Training Manager. To help you prepare for the meeting your Training Manager has suggested that you put together a 'lessons learnt' report in which you can identify what went well, what could have gone better and what you can take forward to the next stage of your development as a professional engineer.
Task 1	You have been asked to review and reflect on the practical activities you have carried out when investigating and exploring measuring, testing and fault-finding in analogue and digital circuits. You now need to produce a short report that considers the 'lessons learnt' during the process. **To do this:**

	You will need to collate all of your work for Assignments 1 and 2 into a single portfolio. You should then review and reflect on the activities that have been completed for assignments 1 and 2, and make notes about what went well and what improvements could be made. You will also need to consider what would be done differently next time. **You will then:** Prepare a short 'lessons learnt' report that includes the lessons learnt from: • exploring analogue and digital circuits, including: o health and safety skills, including managing electrical hazards. This could include electric shock and emergency actions, using appropriate personal protective equipment and keeping the work area clean and tidy • electronic circuit measurement and testing skills, including your selection and correct use of electronic test devices and your personal performance, including: o time planning and management to complete all the different activities in an appropriate time and order o communication and literacy skills to follow and implement instructions appropriately, interpret documentation and communicate effectively with others in writing and orally o your approaches to problem solving and examples of perseverance, such as taking a logical approach to identify the faults.
Checklist of evidence required	A portfolio of evidence generated while measuring and testing electronic circuits. A 'lessons learnt' report reviewing the processes and reflecting on own performance, focussing on what went well and what did not go so well during the various practical activities.

Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
21/D.D3	Demonstrate consistently good technical understanding and analysis of the measurement and testing of circuits, including the application of relevant behaviours and general engineering skills to a professional standard.
21/D.M5	Recommend improvements to the measurement and testing of circuits and to the relevant behaviours applied.
21/D.P6	Explain how health and safety, measurement, testing and general engineering skills were effectively applied when fault-finding circuits.
21/D.P7	Explain how relevant behaviours were applied effectively during the measurement and testing of circuits.
Sources of information to support you with this Assignment	Books Reflective writing; Wiiliams K, Wooliams M, Spiro J; Palgrave McMillan (2012); ISBN 978 0 230 37725 7 Report writing; Reid M; Palgrave McMillan (2012); ISBN 978 0 230 37655 7 Electronic Testing and Fault Diagnosis; Loveday G; (Longman (1995); ISBN-13: 978-0582252424 How to Diagnose and Fix Everything Electronic; Geier M J; McGraw-Hill Education TAB; ISBN-13: 978-0071848299 Websites electronics-tutorials.ws radio-electronics.com/info/t_and_m Further useful resources may be found at qualifications.pearson.com/en/support/published-resources.html#step1
Other assessment materials attached to this Assignment Brief	*eg, work sheets, risk assessments, case study*